Supporting Information

Becker et al. 10.1073/pnas.0810599106

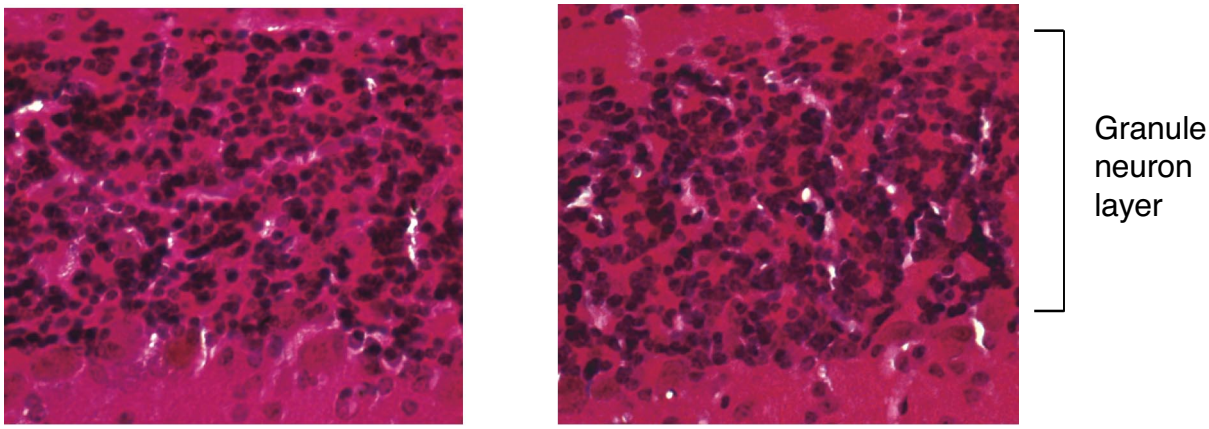
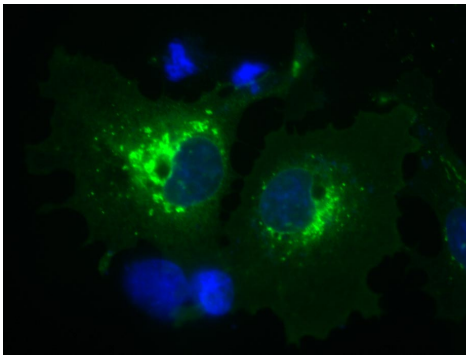
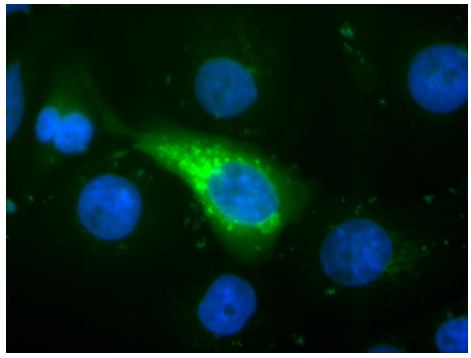


Fig. S1. The cerebellar granule neuron layer is not altered in *Mwk*/+ mice. Hematoxylin and eosin staining of cerebella from 12-month-old wild-type and *Mwk*/+ mice.



wild-type GFP-TRPC3



Mwk GFP-TRPC3 (T635A)

Fig. S2. Wild-type and *Mwk* TRPC3 localize to similar intracellular vesicular structures. GFP-tagged wild-type and *Mwk* TRPC3 were transiently overexpressed in COS cells and visualized by immunofluorescence microscopy.

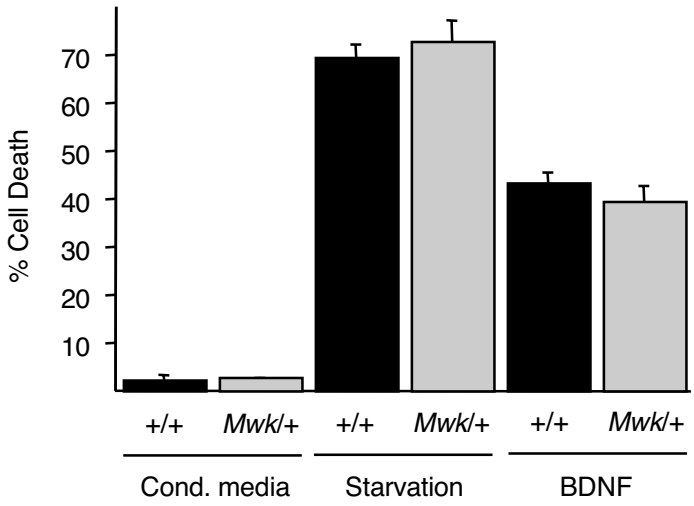


Fig. S3. The *Mwk* mutation in TRPC3 does not affect cerebellar granule neuron (CGN) survival. CGN from wild-type and *Mwk*/+ mice were left untreated in conditioned media, deprived of growth factors (starvation), or treated with BDNF for 48 h and subjected to analysis of cell death. No significant differences in neuronal survival were detected between *Mwk*/+ and wild-type CGN (mean ± SEM, $n = 15$, $P = 0.8487$ [Cond. media], $P = 0.3519$ [Starvation], $P = 0.2881$ [BDNF], ANOVA followed by Fisher's PLSD posthoc test).

Movie S1. Gait abnormalities and retropulsion of 3-month-old *Mwk*/+ mouse.

Movie S1 (AVI)